REMARKS

Minor corrections have been made to the specification. Claim 1 has been amended. Claim 6 has been added. Claims 1-6 remain pending. Reconsideration and reexamination of the application, as amended, are requested.

The Examiner requested that the specification be checked for possible minor errors. Applicants have done this and have submitted corrections.

The Examiner rejected claims 1 and 5 under 35 U.S.C. 102(b) as being anticipated by Tomita et al.

Claim 1 has been amended to make it clear that the inner rotor "consists of" permanent magnets of eight poles. Tomita discloses an electric motor 50 having a rotational shaft (inner rotor) 51 having permanent magnets 51b of 16 poles. Tomita does not disclose a motor having a rotor of anything other than 16 poles. The motor of Tomita would not work with a rotor having anything other than 16 poles as Tomita has disclosed his motor. Therefore, claim 1 is not anticipated.

Furthermore, the inner rotor of claim 1 consisting of permanent magnets of eight poles ensures that the electric motor has an improved cogging performance leading to a comfortable steering touch or feel, can be downsized to meet the limited mounting space of the motor vehicle, and allows the inner rotor to have a low inertia in a range permitted to obtain conformable steering touch. In contrast, owing to the inner rotor having permanent magnets of sixteen poles, the electric motor shown in Tomita et al. is not allowed to be small-sized and has a relatively large rotor inertia, failing to provide a comfortable steering touch or feel. Proposed amended claim 1 should be allowable.

Claim 5 depends from claim 1 and, at least for that reason, claim 5 is allowable.

The Examiner rejected claims 2 and 3 under 35 U.S.C. 103(a) as being obvious on consideration of Tomita et al. in view of Coles.

Claims 2 and 3 are allowable because due to deficiencies of Tomita et al. the subject matter of claims 2 and 3 cannot be attained even when the teaching of Coles (US 6,351,050) is considered in combination with the teaching of Tomita et al. Furthermore, in Coles, two adjacent poles of the permanent magnets and three adjacent poles of the stator are disposed in opposite relation to each other. As against this, in the electric motor of claims 2 and 3, due to a combination of the permanent magnets of eight poles and the stator of nine poles, such a

regularly opposed relationship cannot be formed by and between the permanent magnet poles and the stator poles.

The Examiner has rejected claim 4 under 35 U.S.C. 103(a) as being obvious on consideration of Tomita in view of Coles and further in view of Nishiyama et al.

Claim 4 is allowable because due to deficiencies of Tomita et al. and Coles discussed above, the subject matter of claim 4 cannot be attained even when the teachings of Nishiyama et al. (US 6,049,153) is considered in combination with the teachings of Tomita et al. and Coles.

Nishiyama et al. shows in Fig. 1 an electric motor having an outer stator with twelve poles and an inner rotor with permanent magnets of eight poles. Nishiyama et al. also shows in Fig. 6 an electric motor having an outer stator with twenty-four poles and an inner rotor with permanent magnets of four poles. Having such number of poles, each of the disclosed electric motors cannot form a structure in which each of the three phases comprises those three or multiple of three poles of the stator windings which are positioned adjacent to each other, connected in series, as recited in claim 4.

In Nishiyama et al., if three adjacent ones of the twelve poles of the stator windings shown in Fig. 1 are connected in series and allotted to three phases (3 poles x 3 phases = 9 poles), three poles are left over. Alternatively, if six adjacent ones of the twelve poles of the stator windings are connected in series and allotted to three phases (6 poles x 3 phases = 18 poles), six poles are in short. Furthermore, in the embodiment shown in Fig. 6, if three adjacent ones of the twenty-four poles of the stator windings are connected in series and allotted to three phases (3 poles x 3 phases = 9 poles), fifteen poles are left over. Alternatively, if six adjacent ones of the twenty-four poles of the stator windings are connected in series and allotted to three phases (6 poles x 3 phases = 18 poles), six poles are left over. Additionally, if nine adjacent ones of the twenty-four poles of the stator windings are connected in series and allotted to three phases (9 poles x 3 phases = 27 poles), three poles are in short.

For these reasons, claims 4 and 5 do not follow from a consideration of the cited references and are non-obvious over them.

Claim 6 has been added. This claim specifies that the inner rotor has a solid motor shaft on which the permanent magnets of eight poles are mounted.

In Tomita et al., the rotational shaft (inner rotor) has a tubular shape and carries thereon permanent magnets of sixteen poles in circumferentially spaced condition. With this

construction, the electric motor shown in Tomita et al. is difficult to be small-sized and has a relatively large inertia, failing to providing a comfortable steering touch or feel. On the other hand, since the motor shaft of the inner rotor is solid and carries thereon circumferentially arranged permanent magnets of eight, the electric motor is easy to be small-sized and has a relatively small inertia leading to a comfortable steering touch or feeling.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration and reexamination are requested. Allowance of claims 1-6 at an early date is solicited.

Respectfully submitted,

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